

# BULLETIN OF PHARMACY

A MONTHLY EXPONENT OF  
PHARMACEUTICAL PROGRESS AND NEWS.

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#### MR. C. F. G. MEYER.

The house which is now so well known throughout America as the Meyer Brothers Drug Co. comprises in its membership two brothers who have played a prominent rôle in the drug business for more than forty years. Mr. C. F. G. Meyer, the subject of this sketch and the founder of "Meyer Brothers," came to this country when nearly seventeen. Since then his career has been not unlike that of most successful men, for he was thrown on his own resources, began at the bottom rung of the ladder, and with energy and quick perception as his helpers has achieved for himself a striking and honorable success.

Mr. Meyer's parents having both died ere the completion of his sixteenth year, he was naturally attracted at the outset to the home of his sister in the vicinity of Fort Wayne, Ind. For a few months he attended a common school at Fort Wayne, but under the spur of necessity he cut short his schooling and entered the employ of Mr. H. B. Reed, of Fort Wayne, as an apprentice, working his way upward very rapidly. That was in the memorable year of '49, when the country was scourged by Asiatic cholera. Fort Wayne did not escape the visitation, and Mr. Meyer, equipped with twelve months' experience, was left to do all the dispensing, the others having either fled or yielded to the disease.

In 1852 Mr. Meyer entered into business under a copartnership arrangement with Mr. Watson Wall. In 1857 he purchased the interest of the latter, associating with him his brother William, who is still living at Fort Wayne.

The jobbing house at St. Louis was founded by Mr. Meyer in 1865. The firm was first known as Meyer Bros. & Co., but in 1889 it was merged into the present corporation—the Meyer Brothers Drug Co. The high standing, the wide reputation, and the magnitude of their business are too well known throughout America, and indeed in Europe, to require extended mention.

in damp soil and in stagnant pools, and in running streams containing organic matter, and survives in pure water but does not multiply there; that it is virile only within narrow thermal limits; that it holds its life by a frailer tenure than any other equally prolific and destructive pathogenic spirillum, being quickly destroyed by the official germicides, by drying, by acids, and by a temperature below 56° or above 126° F.

It is the application of this exact knowledge that has confined the cholera to the quarantine dominions at New York, thus preventing its diffusion in the United States; and it is a like application of this knowledge that has, on sundry occasions and at divers points in England and on the Continent, enabled the authorities to confine the Asiatic plague to the single case in which it was discovered. And, *per contra*, it is ignorance of these established facts, or failure to use them, that permits the ravages of cholera at this time in Arabia, in Russia, and on the shores of the Mediterranean.

Every practitioner of medicine in this country should feel it an obligation to constitute himself a propagandist of the knowledge of the means of prevention of cholera among the populace, and when the people are thoroughly informed in this behalf and join intelligently and heartily with the health authorities in recognizing and managing the first case that may appear in any locality, the disease will be stamped out at that point, and then cholera can never again become epidemic in the United States.

Yellow fever is another scourge that has been and still is being much studied, and not with such satisfactory results touching the nature of its course as in the case of cholera, but enough has been determined in regard to its nature to warrant the declaration that it can be stamped out at any point where it may appear. All that is necessary to protect us from further invasion of yellow fever is the watchfulness, the intelligence, the skill, and the devotion to duty everywhere that has been so successfully exercised for eight years by the health authorities at New Orleans.

It is known that yellow fever is an exotic in the United States, and that it comes to us almost exclusively from the inter-tropical islands and mainland on the eastern border of the Western Hemisphere, and it is a reasonable anticipation that the diligent expert investigation now actively prosecuted will presently yield us such knowledge of the nature of its germ and its nativity as will enable us to strangle it in the place of its birth. The pregnant idea of dealing with germ diseases that have a localized origin, at the point of their generation, was under consideration by the Pan-American Medical Congress at its first session in Washington in September; and it is just such great organizations as that, composed of men with enlightened minds and courageous natures, that will work out the problems of sanitary science and art for the welfare of the world.—*James F. Hibberd, LL.D., M.D., in Journal of the American Medical Association.*

**GLAND EXTRACTS.**—In the *fin de siècle* Pharmacopœia vegetarianism reigns supreme, but in the good old days it was quite otherwise. The ancients drew their materia medica with a happy impartiality from both animal and vegetable kingdoms, and, indeed, not so very long ago every apothecary's shop could furnish a collec-

tion of animal curiosities sufficient to put the witches' cauldron in *Macbeth* to shame. Then came science, and the "eye of newt and toe of frog" style of prescription passed away. The physician became possessed with a desire to know something about the action of the remedies he used, and, naturally, inorganic and plant products were the first to give him satisfaction, while the more complex and less easily obtained and preserved products of animal life were dismissed to the background for a time. For a time only, however, and now we are fairly started on our way back to the flesh-pots. Animal alkaloids, albumoses, and gland extracts are already on the cards, and neither a prophet nor the son of a prophet is required to predict that these and similar substances will bulk largely in the B. P. at no very distant date.

Animal materia medica, as a whole, is a big subject, and here it will suffice to touch upon one of its departments—extracts of animal glands. This department is, perhaps, less important and less promising than the others; but results have been obtained in it which a year or two ago would have seemed impossible, and at least one disease, formerly incurable, has now been unquestionably cured. We refer, of course, to myxœdema, treated by thyroid extract, and we might also mention its still more wonderful effects on cases of cretinism. The results in these have been conclusive—so conclusive that even the voice of the scorner is silenced, and, the inevitable stage of ridicule being passed, the new method has entered upon the other inevitable and opposite stage. The medical mind seems to be suffering from an animal-extract mania, and preparations of almost every organ in the body are being tried upon all sorts and conditions of disease. This mania for novelties is, however, nothing more than a little weakness to which "the profession" has always been more or less liable, although, fortunately for the preservation of the genus *homo*, the symptoms are not lasting. In the present instance we may expect a recovery *tutus, celer, et jucunde*, and then animal extracts will get a chance to settle down to their proper place in the therapeutic list.

To attempt to say what that place is, may at present be a little premature, but the experience so far gained seems to justify at least one or two deductions. The general principles of the method are these: A gland produces certain chemical substances—its secretion. If this secretion is essential to the economy, and if for some reason the gland fails to supply it, disease results. Disease produced in this way can be cured by supplying the secretion artificially. This appears to indicate pretty clearly the directions in which the prospectors of gland extracts are likely to "strike ile," for of the numerous glands of the body not all can be of use.

From the extract point of view we may divide the glands of the body into two great groups—glands provided with ducts, and ductless glands. The sweat glands, the salivary glands, the glands of the stomach and intestine, and the kidneys are instances of the variety with ducts; while the spleen, the lymphatic glands, the red bone-marrow, the pituitary body, the thymus gland, and the suprarenal capsules belong to the ductless group. This possession or non-possession of a duct means an essential difference, for the secretion of all the ductless glands remains part and parcel of the body, but the secretion of a gland with a duct does not. The

ducts all lead to the surface of the body, either directly or indirectly through some of the internal passages; in any case the result is the same—whatever the gland secretes is drained away through the duct, and as it ceases to be an integral part of the body it also ceases to have any direct action on the tissues of the body.

It follows, therefore, that these glands with ducts cannot very well occasion disease in the way we have indicated, and no benefit can be expected from the administration of extracts made from them. With the ductless group of glands it is otherwise. They have no communication with the exterior of the body, and all the chemical substances they produce must enter the circulation and exercise directly on the tissues whatever action they possess. Just here arises the question, "What may that action be?" In the case of a gland with a duct there is, of course, no trouble. The secretion can be collected, and bottled, and labeled. Its chemical constituents and its physiological action can be put down in black and white, and a Q. E. D. writ large thereon.

The functions of the ductless glands, on the other hand, are still a matter of dispute, and there is no other group of organs in the body about which physiologists know so little. Some of them, indeed, are even yet looked upon as mere curiosities, but this much we can take for granted: none of these glands are there without some useful function. The very significant fact that in certain diseases they undergo profound alterations in size and structure has been known for a long time, but the exact bearing of these alterations upon the diseases was a matter merely for conjecture. Now, however, the experience gained from myxœdema has thrown a flood of light on the whole question. The gradual wasting of the thyroid gland, and the simultaneous overloading of the whole body with a growth of mucoid tissue, suggested the inference that the normal thyroid secretes something that prevents the growth of the parasitic tissue. But the inference becomes as nearly a certainty as anything medical can be when by giving thyroid extract we see the rapid disappearance of the mucoid substance and the return of the system to health. In addition to myxœdema and cretinism, quite a number of diseases are already known to be associated with changes in one or other of the ductless glands, and now that attention has been prominently drawn to the matter we may expect to have many additions to the list. It will be in diseases of this class that the gland or its extract can be given with some reasonable prospect of success.

For pharmacy, as well as for medicine, this opens a new field—of no great size, it is true, at present, but promising for the future. From the trade standpoint gland extracts have one cheerful quality—unlike the majority of things medicinal they belong to that admirable class of articles which once used are always used. There is no such thing as a permanent cure of myxœdema or any allied disease. The glands normally producing the secretion being destroyed, the cure can be kept up only so long as the treatment is kept up, and through life a regular supply of gland extract becomes as necessary as a regular supply of food and drink.

Animal extracts do not come to the pharmacist as an unmixed blessing. They bring with them difficulties numerous, peculiar, and not provided for in the subjects of the Major and Minor examinations. These will no

doubt be overcome in due time, and when they are we shall have pharmaceutical preparations containing the active element of the gland, and that only, elegant in form, innocent of germs or toxins, and capable of being prescribed and dispensed *secundum artem*, with adjuvants and correctives if need be, and with that fine precision and gradation of dose which are almost, if not quite, the most important factors of successful treatment. A great deal remains to be done before this state of perfection can be reached, but the enterprising pharmacist is already well in the running, and soon we may expect to see his shelves decorated with pilula pituitariæ, syrupus thyroideæ, succus suprarenalis, and many other startling and novel remedies, which will doubtless prove a blessing both to "him that gives and him that takes."—*Editorial in Chemist and Druggist*.

PHARMACEUTICAL MICROSCOPY.\*—It is my intention this evening to enumerate some of the many uses to which a pharmacist may place his microscope, and that with considerable advantage to himself. In the first instance, as a pharmaceutical student, he becomes acquainted with the microscope when pursuing the study of botany. In the first stages of this science a simple microscope or lens will be found adequate for all his requirements, and will enable him to clearly distinguish any external characteristics of the plant otherwise indistinct to the unaided eye. When, however, the interior of the plant is reached, and we wish to become intimately acquainted with its structure and workings, its cells and tissues, and the thousand and one other minute structures which go to make up the plant, then it is that a good compound microscope must be brought into play. In fact, we thus see that without the microscope the science of botany would be reduced to a mere list of plant names, and the all-important anatomy, histology, physiology and scientific classification of the plant would be unknown. My advice to the students here to-night is to study botany with diligence and perseverance, so as to obtain a complete mastery of its principles, for upon those principles is built the foundation of the knowledge of vegetable drugs. And yet we sometimes hear the question raised, "Of what practical use is botany to the pharmacist?"

I maintain, and I am sure that every one present will agree with me, that the pharmacist of to-day should be able to ascertain the purity of the preparations and chemicals sold by him; he also should possess a thorough knowledge of the quality of the crude vegetable drugs which he puts into stock. But very many of these drugs must be sold and dispensed in powder form; and although no doubt it would be much more satisfactory if the pharmacist would powder his own drugs, yet where is there a pharmacy containing the necessary apparatus for so doing? Therefore, in most cases the retail chemist is obliged to obtain his powdered drugs from the wholesale houses. The consequence is that unless he is prepared to examine such powders chemically and microscopically he cannot give a personal guarantee of their purity. At the present time the important subject of microscopical pharmacognosy is in its infancy. It is a most inviting field of inquiry, and one in which much valuable work

\*Read before the Sheffield (Eng.) Pharmaceutical and Chemical Society.

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DANIEL ROGERS NOYES.

It has assuredly not been uninteresting to observe in the series of biographical sketches which have appeared in these columns the varying nationality, origin, and early environment of the men who have made their way to positions of prominence and success in the drug trade. In no better way could we gain a conception of the diverse elements which have entered into our commercial life and which will impart to the future American type features which cannot now be conjectured. We have had an American type in the past; we shall have a distinctively national character in the future; but for the present, amalgamation of varied elements is proceeding, and the final result is yet remote.

The extraction of Mr. Noyes must be sought for among those New England families who for a long period made all our history, and whose descendants to-day fill the majority of our high places, commercial, professional, and political. Mr. Noyes was born at Lyme, Conn., Nov. 10, 1836; was educated in the best schools of New England; and in 1854 removed to New York State, where he engaged in business. At the outbreak of the Civil War he enlisted as a volunteer, but his term of service was curtailed by ill-health. Some of the following years were spent in domestic and foreign travel; on his return he re-engaged in business as a partner in the banking house of Gilman, Son & Co.

Coming to St. Paul in 1868, Mr. Noyes soon after founded the house of Noyes, Pett & Co., now Noyes Bros. & Cutler—the most extensive drug house of the Northwest, whose trade extends to the Pacific coast and New Mexico, and approximates in volume two millions annually.

Mr. Noyes is senior member of this firm; is Vice-President of the St. Paul Trust Co.; Vice-President of the Real Estate Title Insurance Co.; director in the Merchants' National Bank; director in the Union Land Co.; director in the New York Equitable Life Insurance

### Causes of Turbidity in Solutions of Zinc Chloride.

Extemporaneous solutions of zinc chloride are often turbid. Hence the following explanation offered by M. Carles and abstracted in *Répertoire de Pharmacie*:

Commercial chloride of zinc, dry or in solution, always contains oxide of zinc. Dissolving this salt in the cold, an elevation of temperature is produced which favors the dissolution of a part of the oxide contained in the chloride; the quantity of oxide of zinc dissolved increases with a rise in temperature and with the quantity of chloride of zinc in the solution. If the solution be filtered immediately after dissolving the salt, the filtered and limpid solutions soon grow turbid. Complete cooling of the solution must accordingly be waited for.

The developed precipitate is the oxychloride of zinc, which, when examined microscopically, is seen in the form of hexagons or of jagged and fragile needles. It is easy to see that such solutions must give pain when hypodermatically injected after the manner of M. Lannelongue.

Nor should it be forgotten that a cold solution of chloride of zinc becomes turbid on the addition of water, dissociation occurring in such case. Hence, solutions of chloride of zinc should not be filtered until after adding the entire quantity of water which they are to contain.

These solutions should always be prepared with distilled water. Common water, containing carbonate of lime, produces five times as much precipitated oxychloride as distilled water; the liquid then acquires a degree of acidity which is capable of provoking pain in the patient.

### Is Boric Acid Injurious?

Dr. L. Tortchinsky, in the *Gazette Hebdomadaire de Bordeaux*, says he used boric acid in two hundred and forty cases of typhoid fever in the course of an epidemic, and reports excellent results; only nine patients died, and they succumbed during the period of convalescence because they got out of bed too soon, or committed errors in diet. The two hundred and thirty-one other patients made a rapid and complete recovery. In all the cases the patients were given a dose of castor oil with from five to ten drops of oil of turpentine. After this mixture had operated, the administration of boric acid was begun, the remedy being given internally, either in powder or solution, in doses ranging from twelve to fifteen grains for an adult, three or four times a day. When there was bronchitis the boric acid was associated with expectorants and with hydrochloric acid. As a general rule, at the end of from three to five days the fever and the diarrhoea underwent a noteworthy diminution, the tympanites disappeared, the dejecta lost their odor and became normal in appearance, the urine became abundant and in every way normal, the tongue and skin grew moist, and the general condition was good. As soon as the amelioration was well marked, the use of the acid was discontinued, and tonics were ordered. Under the influence of this treatment the disease followed a favorable course, its duration was somewhat diminished, and complications were very rare. The most decided effects were obtained in cases treated early. The author has found that the effects of the boric-acid treatment may be increased by combining with that drug small doses of acetanilid, quinine, naphthalin, or salol. The mixture with quinine

is especially useful in the last stages of the fever, when there are ataxia, delirium, and other cerebral symptoms; it is useful also in cases of relapse. The author has never observed any harmful effect from the use of boric acid. He has also produced satisfactory results with this acid in the treatment of the summer diarrhoea of children.—*Food and Sanitation*.

### The Uses of Animal Extracts.

Between such organs as, for example, the brain and the thyroid gland, there are many and great differences. One of these differences is all-important: The thyroid gland is a secretory organ; the brain is not. Without entering into a discussion of the exact nature of the process, concerning which the evidence is not clear, it is sufficient to know that clinical and experimental observations are at one in demonstrating that the thyroid gland manufactures some substance which, by its function in the economy, prevents the occurrence of the symptom-complex termed myxoedema or cachexia strumipriva. The principle is exactly the same as that upon which we administer pepsin or pancreatin in digestive disorders; the body failing to furnish a certain substance which is necessary to the proper nutrition of all the organs, we supply that lack by administering a similar substance obtained from animals.

It will be observed, moreover, that whatever it may be that is accomplished by administering thyroid extract, it is not the cure of the disease of the thyroid gland. No one, surely, expects to cure disease of the peptic glands by giving pepsin, or disease of the pancreas by giving pancreatin. Cure can only be obtained by measures which will secure natural reproduction of the missing secretions.

The brain, so far as we know, secretes nothing physical; so far as we know, there is no symptom or symptom-complex which can be attributed to defect in any supposed secretory function of the brain. Consequently, there is nothing in the whole nosology which, on theoretic grounds, the administration of brain extract could be expected to remedy. Similarly the heart, so far as we know, secretes nothing, and there is no symptom or symptom-complex which can be attributed to default of supposed secretory function on the part of the heart. Equally, therefore, there is no ground for the administration of heart extract to remedy disorders caused by disease of that organ. For, let us remember, the thyroid extract does not cure thyroid disease, the thymus extract does not cure disease of the thymus, the pancreatic extract does not cure disease of the pancreas; and to expect brain extract to cure brain disease, or heart extract to cure heart disease, is on a par with the science of the Obi-doctor and the practice of the lizard-giving Chinamen.—S. SOLIS-COHEN, M.D., in *Polyclinic*.

### French Ideas of Pharmaceutical Education.

In a paper in the *Bulletin de Pharmacie de Bordeaux*, Professor Huguet, of the Clermont-Ferrand School of Medicine and Pharmacy, outlines a programme of pharmaceutical education. He first defines a pharmacist as one who practices pharmacy, and then describes the latter as an art, depending upon numerous scientific data,